P-W

Underwriters Syndicate-Mack #1,55 NW/4-NE/4 Sec 13-Twp 6S-R 24E 5-5

County Graham Area _ Lease No. Well Name . Underwriters Syndicate SE corner of Location NE NW Sec 13 Two 68 Range 24E Footage 1080 ful 2350 fwl

Rlev 4 4

Spud Completed Total 4 KB Date 0 7 27 __ Depth ___<u>3767</u> Abandon _4-16-28 Approx. Cost \$ Drilled by Rotary Cable Tool _ Casing Size Depth Cement 24 30 Production Horizon 80 10 123 680 1950 landed 10 REMARKS (Sample log from ARM FILES) Eiec. Sample Log Sample Descrip. X Logs Plugging Applic Plugging Completion Sample Set to Plug Record Report Cores Water well - accepted by ____ Bond Co. & No. ___ Date Organization Report _____Cancelled ___ Bond Am't \$ _ Filing Receipt _____ Dated ____ Well Book ___ Plat Book ____

Loc. Plat ___ Dedication _____

API # 02-009-05006

PERMIT NUMBER _____ Date Issured ____

#55

Underwriters Syndica s from Knechtel, 1938 EI	ate # 1	Mary Mack	5	Sec	13-	65-24E	(#5	-5)
MACRIMITION	Unit	Description	Thick-	Depth	Assig	nment to Fac ed in this Re	les port	
from Knechtel, 1938 EI	lev.		ness (feet)	(feet)				
("		Sancy toath	$-\frac{3}{17}$	3 20				
	0000	Sand Gravel; water	160	180	Inner	-valley fill	P	
	000	-Unconformity			 -	<u> </u>		
		Red sandstone	120	- 300				
, 2,	,500			-	Red	facies		
	- 1	Red sandy shale	160	460	l Red	100		
		Brown shale Black shale	40_ 10	500 510	-			:
		Brown shale	50	- 560	-1			•
		Gray shale	96	656	-1	•		
	1000000 100000000000000000000000000000	Red sandstone Brown shale	56	740	Calc Red	arcous zone (facies; prob	ably	:
		Gray shale	95	835	equi	ivalent to Eva	porite	÷
	2,000	Cypsum and shale Blue shale	17	852 870		es.	. دود	;
		Hard shale Gray shale	10	950 950	0			
		Blue shale	60	1, 020				
	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			2 27		•	i	:
		Brown shale	250	1,27	ا ا			:
	1-2=	Garal	30	1,30	Re	d facies		
	1,500	Gravel Brown shale	90	1,39	0			·
		Limy shale Red shale	58	1,45	0			
		Sand	19		70			
<u> </u>	2200	Red shale	52 38	LL-51	30			
		Red shale Red sand Gravel	-15	-11.6	<u> </u>			
		Red sand Sand; water		1:7	20 30		1	
	1,000	Gravel Red sand	- i		13 55			
1		Gravel		5 1,5 7 1,8	20_			÷
in the state of th		Red gravel Red snud Red shale	10 50	0 1.6	30 80 85		.	
			1	2 1.8	97			
*		Gravel Hard red sand Limy shale Red sand		5 <u> </u>	52	. •		
		Sand; water	7	7 2.2	220 250	•	1	
	500		5	5 2,3			ļ	
	300	Sand: water Red sand			399	Basal	1	
		Red shale Gravel		5 2.	475 480	Conglomerat	e '	
		Limy shale Gravel		18 2. 22 2.	498 520 575	Facies	į	
		Red shale Red sand		55 2. 85 2.	660 1			
		Red shale		30 2.	690 ხ 702	are Valley-5.71 4	lakr beis t	Land Deft.
)		Broken sand Hard lime Sandy shale		$\frac{5}{63}$ $\frac{12}{12}$	797	•	,	
į	0 懂	Red sandstone		$\frac{30}{20}$	600			
**		Pink shale			850			
5 :1		Red sandstone	- 1		,005			
j,		Red shale			,094		-	
44 77 74 74		Hord lime Sand	ter	70 13	101 140 ,210			
		Red sand; wa Gray lime Fed sand	LEX	2 15	2 2 2 2 7			
# 1.1 1.1	-500	Cray lime		3 3	250 254			
		Gray sand Gray lime		4 3	258 273			
į		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		14 3	3.287			1.
Í		Red sandston	-	243 10	3,510	Flow inc to 50	,933 6615/3	-1 0 4 3.
3	11 1	Red sandston	e	180	3,720		•	
		Red sandy sh	ale	14 4	3,734 3,738		-	
	-1,000	Gypsum Red sandston		29	3 <u>,767</u>	(Total depth)	
Å.	-1,000			JRE 7.		rages	e grande de la companya de la compa	,
A D M	LOG OF	THE MARY S. MAC	w wei	1 NEA	R PIMA	. WITH STR	ATIGRAPIO	c
ي م	ASSIC	SUMENT OF UNITS	TO FA	CIES PR	OPOSE	D IN THIS R	BIUNI.	Line Company of the C
The first of the second			-				Arriver :	

(13-62-248 5-5

Wodern Hes Sil .. H | Mayu Mack (Gila oil Synd)

	Log,	(Synl) from Knechtel, 19	38			
	Unit			Depth	Assignment to Facies Proposed in this Report	
Elev. (feet)			ness (feet)	(feet)		
		Sandy loam Sand	3_17	3 20		
_	0000	Gravel; water	160	180	Inner-valley fill G	
	0.00	—Unconformity—			· ·	
		Red sandstone	120	- 300		
2,500			160	460	Red facies	
		Red sandy shale	40	500		
		Brown shale Black shale	10	510		
		Brown shale	50	560		
		Gray shale	96	656		
	7	Red sandstone	28	684	Calcareous zone within	
		Brown shale	56	740	Red facies; probably	
2 000		Gray shale	95	835	equivalent to Evaporite	
2,000	, , , , , , ,	Cypsum and shall	e 17	852	facies.	
		Blue shale	18 80	870 950	- 1	
	-0.5	Hard shale Gray shale	10	960		
	1	Blue shale	60_	1,020	1	
		Brown shale	250	1,270		
		Gravel	30	1,300	Red facies	
1,500	10000	Brown shale	90	1,390	7	
		Limy shale	2	1,392		
Ì	1	Red shale	58	1,450		{
} }	77.73.0	Sand Gravel	19	1,451		
			52	1,522	<u>-</u>	\
1		Red shale	38	$\frac{1.542}{1.580}$		
ł	vice in	Red shale Red sand Gravel	45	1,625	r -	1.
.	-{: <u>::::</u>	Red sand	15	1,645		
		Sand; water	75 10	$\frac{1.720}{1.730}$	7	<u> </u>
1,000	000	Red sand	18	1,775		
ľ	¥30.00	· MCCMARRY SHARE	40 15	1, 503		
t .	— ¥⊃0.70	. All Maca Shire	1.7	11.820		
		Red gravel	10 50	1,830		
	-	Red snnd Red shale	12 12	1,885 1,897	<u> </u>	
	:::::		50	1.947		
		Hard red sand Limy shale	5	1,95		
		Red sand	191	2, 143 2, 220		
500	- 1.1.1.1 11.1.1.1	Sand; water Red sand	77			
	===	Red shale	55	2,305		
	0	Sand: water	13		<u>g</u>	į
		Red sand	81	2, 39	9 Basal	;
	TEE	Red shale	76			ŗ
		Gravel	<u>5</u> 18	2,48		!
1	9.0	Limy shale Gravel	22	2,52	Facies	i i
		Red shale	55	$\frac{12,57}{}$	5_	}
		Red sand	85			Lard D
		Red shale	30			Lune. V
		Broken sand Hard lime	5	2,70	<u> </u>	
	I		63	2,77	tu i	1
	0	Sandy shale		3 00	<u> </u>	1
	0	Red sandstone		2, 80 2, 84	0	
	0) 2, 80) 2, 84	0	·.

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)	===			\	Red facies	
		Red sandy shale	160	460		(2) (2) (2) (3) (4) (5) (6)
E		Brown shale	40	50 <u>0</u> 51 <u>0</u>		1
75		Biack shale Brown shale	10_ 50	560		
			96	656		Ĭ.
-1-		Gray shale		_	·	
<i>}</i>		Red sandstone	28	684	Calcareous zone within	
- i		Brown shale	56	740	Red facies; probably	
200		Gray shale	95	835	equivalent to Evaporite	•
000 -		Cypsum and shale	T/	852		
		Blue shale	18	870		
_		Hard shale	80 10	950 960		İ
_		Gray shale Blue shale	60	1, 020		
		T Dine orange		12 ===	T	
_			1		·	
		Brown shale	250	1,270		
_					Į.	
				1.000	Red facies	
,500 -	اه مهره	T	30	1,300		
-		Brown shale	90	1,390		•
_		Limy shale	$\frac{2}{58}$	1,392	· (
		Red shale	1	1,45		
-		Gravel	19	1,470		
	225.00	Red shale ked sandstone	52 20	$\begin{array}{c c} & 1.52 \\ \hline & 1.52 \end{array}$		}
•	-	Red shale	3 <u>§</u> 45	1, 580	<u></u>	,
		Gravel	5	1,630	二	
•		Red sand Sand; water	$-\frac{15}{75}$	1, 64,		
000	7-1-	Cravel	10	1,730		
,000.	2000	Red sand	18 40	$-\frac{1}{1,788}$		-
		4\\\Cravel	13	11,00		
•	7	Red shale	17	1,820		
		All Red gravel	50	1,83		
•		:: Red shale	$\frac{1}{12}$	1.88 1.89		
		WCrayel Hard red sand Limy shale	50	1.94	7	
		Red sand	191	1,95 2,14		
		Sand; water	77	2, 22	1	
	111111	Red sand	30	2 25		
500		Red shale	55	2,30	5	
300	2	Sand; water	13	2,31	i ~ •	Ī
	::::::	Red sand	81	2, 39	-	į
	====	Red shale	<u>76</u> 5			;
	200	Gravel Limy shale	18	2,49	8	<u>;</u>
		Gravel	22	2,52	0 Facies	i i
	- 	Red shale	55		L .	
		Red sand	85 30			le - Land Deet
		Red shale Broken sand	12	2.70	2	
		_ \	5	2.70	7	P P P P P P P P P P P P P P P P P P P
0	1	Eandy shale Red sandstone	63 30	$\begin{vmatrix} 2,77 \\ 2,80 \end{vmatrix}$	<u>ö</u>	
		Red shale	40	2,89	\Box	\ .
	4::::	Pink shale	10	2,85	U	1
		Red sandstone	155	3,00	5	
	1					1 .
-500 -	Red shale	89	3,09	4		
	Hard lime		3,10 3,1			
	Send Red sand; water	39 70	$\frac{13.14}{3.51}$	<u>U </u>	}	
	Gray lime	2	3.2	2		
	F.ed sand	35	3, 2	7	<u> </u>	
	1::::	Gray lime Gray sand	3		<u>54</u>	
		Gray lime	4	3,2	8	
	1::::	\Gray sand	15	3,27	<u> </u>	
		Sandy lime	14		. 1	į
		Red sandstone	243		10 Flow inc to 50,000 bbls	124 hrs.
		Red sand		<u>, 3,3,</u>		1
•		Red sandstone	180	3,7	20	ł
		A	i		!	
					 .	1
٠		Red sandy shale	1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	34	
-1,000		Red sandy shale Gypsum Red sandstone		$\frac{4}{}$ 3,7	34 38 67 (Total depth)	

FIGURE 7. — Lote of all pages on sold??

LOG OF THE MARY S. MACK WELL NEAR PIMA, WITH STRATIGRAPHIC ASSIGNMENT OF UNITS TO FACIES PROPOSED IN THIS REPORT.

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FT WARDARD

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Underwriters Syndicate No. 1

SE corner of NE. 1 NW 13-68-24E Drilling commenced Oct. 7, 1927, Log collected April 16, 1928. TD. 3767'. Log from ABM files

0	80	Gravel
80	760	Red beds (Cavey shale)
760	930	Salt
930	1460	Red beds, (shale)
1460	1463	Sand, showing oil
1463	1580	Red bed, sand
1560 `	2450	Water sand
2450	2930	Water sand
2930	3100	Red bed, shale
3100	31.05	Red sand

Casing record 24" 30' 80' 80' 12½" 680' 1950, landed.

Mark Mark Commander of the Commander of

ho sermit

O

Underwriters Syndicate-Mack-No. 1 SE corner of NE NW 1 13-65-24E-Drilling commenced Oct. 7, 1927, Log collected April 16, 1928. TD 3767', Log from ABM files Graham County, Arizona

0 - 80 Gravel
80 - 760 Red beds (Cavey shale)
760 - 930 Salt
930 - 1160 Red beds, (shale)
1160 - 1163 Sand, showing oil
1163 - 1580 Red bed, sand
1580 - 2150 Water sand
2150 - 2930 Water sand
2930 - 3100 Red bed, shale
3100 - 3105 Red sand

AND STATE

SEPPE

Casing record 24" 30'.
20" 80'
12½" 680'
10" 1950', landed.

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ne permit

13.

Log of Well No. 2

250 Clay and white rock (Red Hall Line)

800 Alternating layers of clay (25'-30' thick) 250 and sodium rook (10'-15' thick)

800 - 1400 Clay and h va rocks

- 1625 Igneous rocks 1400 Water encountered at 1,000 feet and analysed. 33% sodium.

The sodium sulphate mine, approximately in Section 6, T. 13 N., R. 5 N., G. & S. N.M., was also visited. The mine was shut down, but three prospect shafts were being sunk. .

SAFFORD AND BOWIE AREAS:

Ashurst No. 1. NEW MET Section 30, T. 5 S., R. 24 E., G. & S.R.M. Drilling depth 1,247 feet carrying 10-inch casing. Water not shut off. No evidence of structure. Well visited April 16, 1928. Log of Ashurst No. 1

> 0 -20 Brown clay 50 Gravel - Nater 20 -450 Brown clay 50 -

465 Red sand - water 450 -

510 White lime 465 -540 Lime and shale 510 -

620 Light gray sand - water (about 10,000 barrels per day) 540 -

667 Lime and shale 620 -

717 Shale 667 -

757 Gray gravel 717 -757 - 1,197 Gray shale

1,197 - 1,247 Brown shale

Underwriters' Syndicate No. 1. Located in the southeast corner of the NE : /Wa Section 13, T. 6 S., R. 24 E., G. & S.R.M. Operations temporarily suspended at 3,103 feet. Drilling commenced October 7, 1927. Well visited April 16, 1928. No evidence of structure. 5-5

Condensed Log of Well.

0 -80 Gravel

80 - 760 Red bed - (Cavey shale)

760 - 930 Salt

930 -1,460 Red beds (shale) 1,460 -1,463 Sand - showing oil

1,463 -1,580 Red bed - sand

1,560 -2,450 Water sand

2,450 -2,930 Red sandy shale 2,930 -3,100 Red bed (shale)

3,100 -3,105 Red sand

Casing Record

 24° - 30 feet; 20° - 80 feet; $12\frac{1}{6}^{\circ}$ - 680 feet; 10° - 1,950 feet landed.

Canfield Rpt, 1928

TES, 1937

GILA RIVER AND SAN SIMON CREEK, ARIZONA

203

Log of Mary S. Mack well in sec. 13, T. 6 S., R. 24 E., near Pima

ila Valley are rocks peneare of sedi-.500 or 1,600 elong to the

ter level while

eet from ground

1 track, 124

	Thick- ness	Depth	Remarks
	Feet	Feet	
Sandy loam	3 17	3 20	
SandGravel: water	160	180	
Unconformity			Base of alluvium; hole full of freshwater.
Red sandstone	120	300 460	
Red sandy shale	160 40	500	
Black shale	10	510	
Brown shale	50	560	ra en
Gray shale	96 28	656 684	
Brown shale	56	740	(-5
Grav shale	95	835	1,43
Gypsum and shale	17	852 870	file 5-5
Blue shale	18 80	950	
Gray shale	10	960	
Blue shale	60	1,020	
Brown shale	250	1, 270 1, 300	
GravelBrown shale	30 j 90 j	1,390	
Limy shale	2	1, 392	
Red shale	58	1, 450	
Sand	1	1, 451 1, 470	
Gravel	19 52	$\frac{1}{1}, \frac{4}{5}$	
Red sandstone	20	1,542	
Red shale	38	1, 580	TTT 12 d
Red sand		1,625	Well flowing 12,280 barrels of water in 24 hours.
Gravel		1,630 1,645	
Sand; water		1, 720	Flow of water increased.
Gravel	10	1,730	
Red sand	18	1,748	
Sandy shaleGravel		1.788 1.803	1
Red shale	17	1,820	
Red gravel		1,830	
Red sand		1,880	
Red shaleGravel		1,885 1,897	1
Hard red sand		1.947	İ
Limy shale	5	1.952	<u> </u>
Red sand	191	2, 143 2, 220	Do.
Sand; waterRed sand		2, 250	
Red shale	55	2, 305	
Sand; water	. 13	2,318	Do.
Red sand Red shale	. 81 76	2, 399 2, 475	
Gravel		2,480	
Limy shale		2, 498	
Gravel	. 22	2,520	
Red shaleRed sand	. 55 85	2, 575 2, 660	
Red shale	.] 30	2,690	
Broken sand	12	2, 702	
Hard lime	. 5	2, 707 2, 770	
Sandy shale	. 63 30		
Red shale	1 40		
Pink shale	. 10		
Red sandstone	155		
Red shale	. 89	3, 101	
Sand] 39	1 1	
Red sand; water	_ 70	3, 210)
Gray lime	- 2		
Red sand		2.4	
Gray sand		3. 254	!
Gray lime	- 1	3, 258	
Gray sand	_ 15		
Sandy lime	- 14 243		
Red sand) Flow of water increased to 50,000 barrels in
	-1		hours.
Red sandstone.	180	1	
Red sandy shale	- 14	3, 738	3
Red sandstone			7 Bottom of well. Shut down Nov. 4. 192
•		İ	Pulled 614-inch casing and reamed hole to

USGS WEP 796-F 1938

Bottom of well. Shut down Nov. 4, 1929. Pulled 6¼-inch casing and reamed hole to 10 inches to 3,300 feet and drilled 8¼-inch hole to depth of 3,767 feet.

212 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES, 1937

water to the surface in a second well (d, fig. 30) having as mouth at or below the level of the first but farther from the intake area.

The favorable geologic conditions in the lake beds and the successful drilling for artesian water that has been carried on over a period of several decades warrant the belief that artesian water is present in

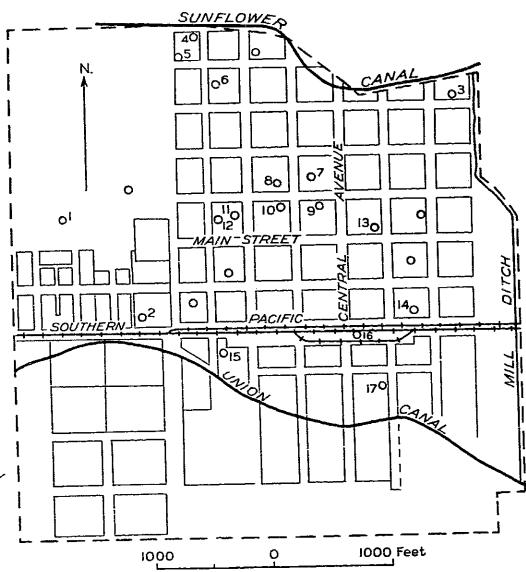


FIGURE 32.—Map of Safford, showing location of wells, 1934. (See wells 189-203, table following

nearly all parts of the Gila and San Simon Valleys that are underlain by these beds, at depths within easy reach of drilling equipment.

WELLS IN THE DEEP SANDS

The deepest well in Graham County is the 3,767-foot Mack well, in sec. 13, T. 6 S., R. 24 E., near Pima. This well penetrated five water-bearing sands below 1,600 feet, the deepest one at 3,530 feet. The geologic age and structure of the deeply buried sediments containing these sand beds is not known, and no explanation of the occurrence of water in them is offered. It is possible that they are marine sediments and are much older than the lake beds.

FIGURE 3 Indian deep w 1934 a 6 S., R. compar well an The elevata 1,820 f

A well feet near of Indian flows at d surface. hot. Th

WSP 796-F, 1938

Sample 1

Plate 46, WSP 796-F, 1938 R.24 E. Big. Bear Springs Flat

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The second secon

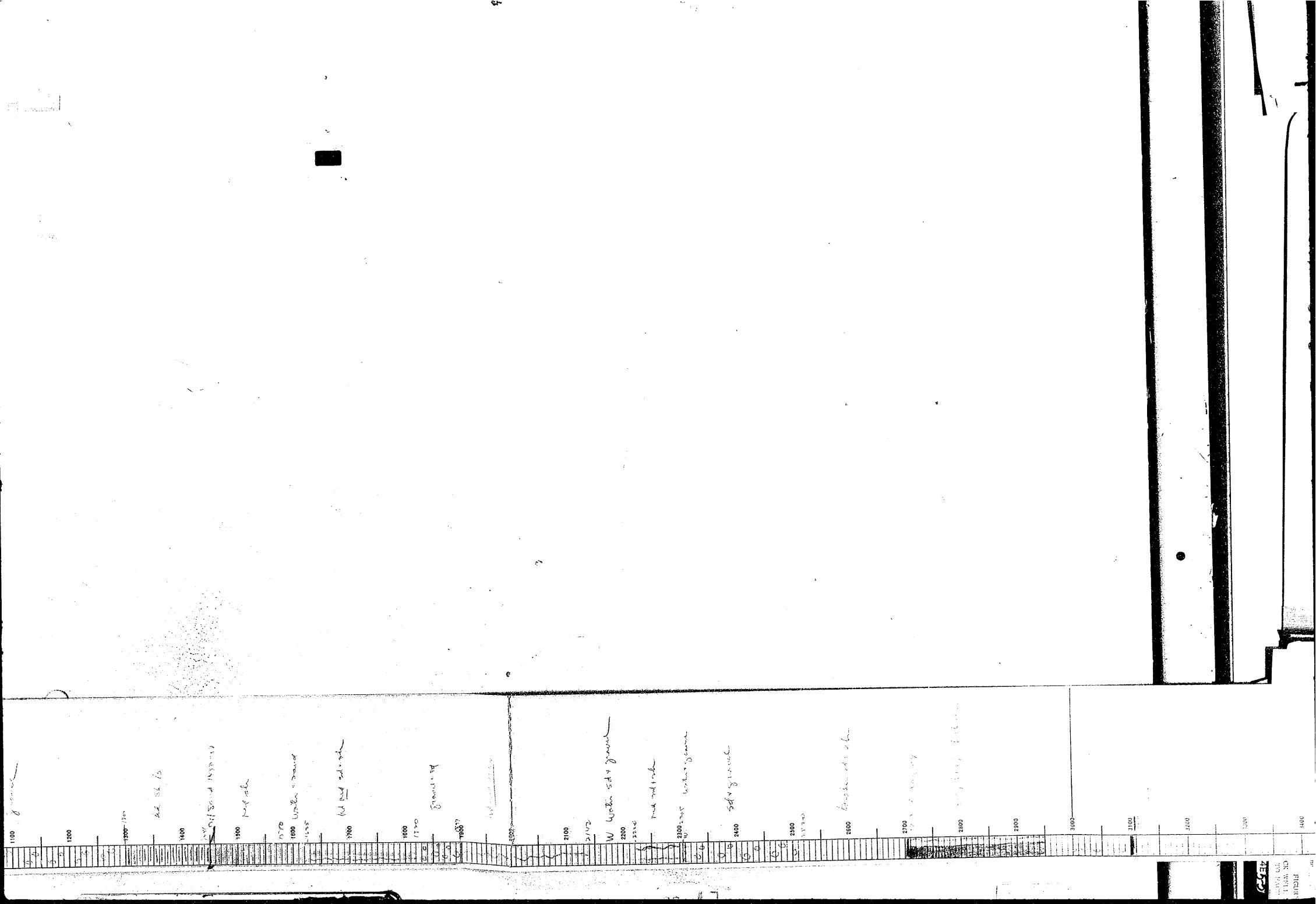
alle de la company de la compa

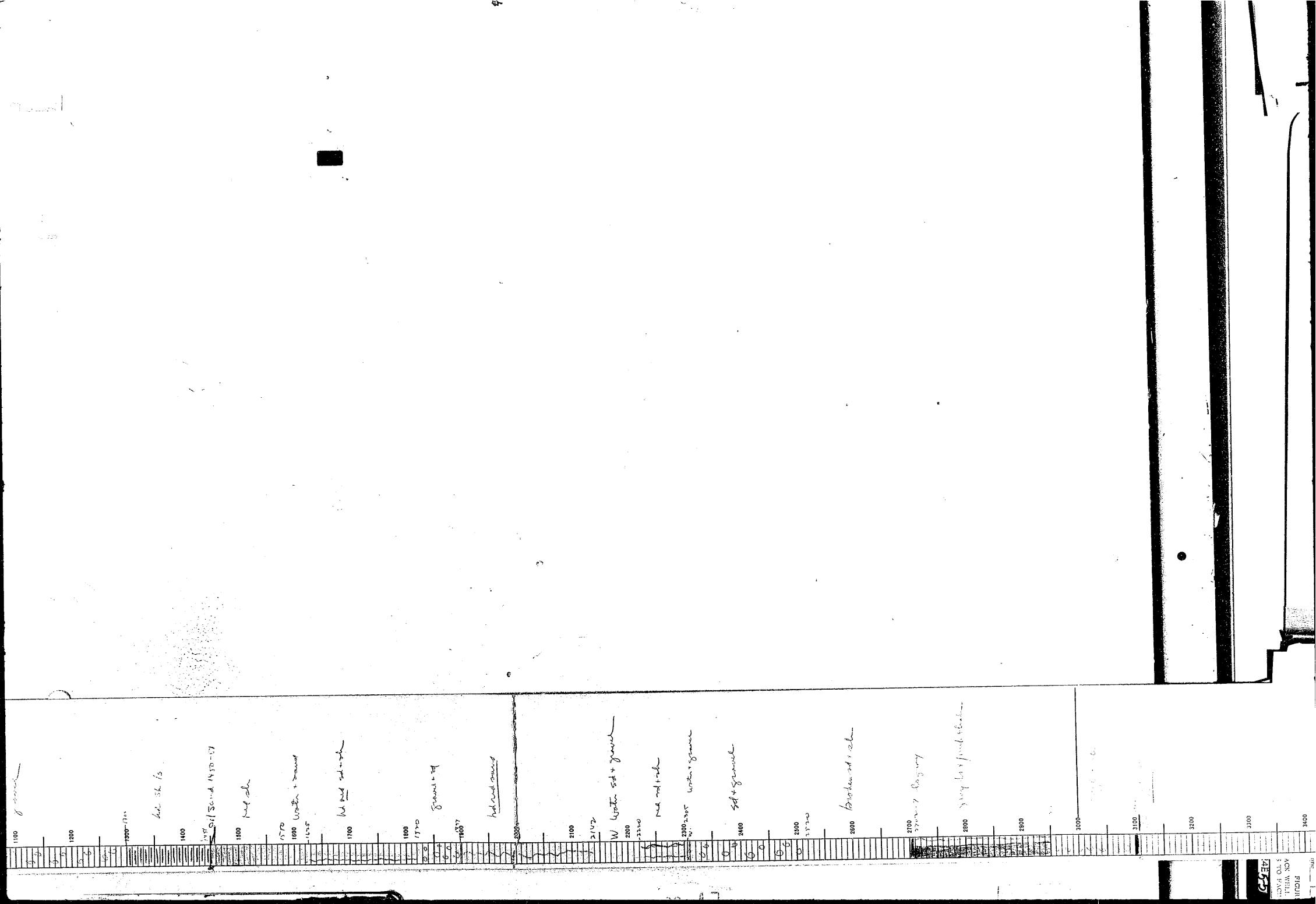
⊕ 3:38 Wells 2805 o Wells Wells We Is of CEN 3767 8 We//s Вм 2826 CANAL wells

e

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N.B. This log is different from type written log in





30/4-NE/4 Sec 13-1Wp 65-R 24E

ASSIGNMENT OF UNITS TO PACE

GILA VALLEY FROM SAFFORD TO INDIAN HOT SPRINGS

INTRODUCTION. Indian Hot Springs, 26 km northwest of Safford is notable because it has been the site of a spa and resort at various times during the past 50 years (Fig. 2.46). Several deep (>500 m) wells have been drilled in the Gila Valley which have artesian flows of hot water (>40°C). The 1929 Underwriters Syndicate 1 Mack oil and gas test or "Mary Mack well" is the hottest of these wells, with a reported discharge temperature of 59°C (Knechtel, 1938). This well, near the town of Pima, is no longer flowing; we believe water pressure broke through the deteriorated casing after the well was temporarily shut in several years ago. The Smithville Canal well, near the town of Thatcher, produces 46°C water and was formerly used by the Mount Graham Mineral Bath before this spa was destroyed by flooding of the Gila River in the winter of 1977-78. Today, this well flows freely into the Gila River.

PHYSIOGRAPHY. The Gila River has entrenched into the sediments that fill the northwestern Safford-San Simon Basin, and has formed a northwest-trending flat-bottomed valley or flood plain 5 to 8 km wide (Fig. 2.46). Elevation of the flood plain ranges from about 884 m at Safford to 823 m at Fort Thomas, 5 km northwest of Indian Hot Springs. Paired terraces 20 to 30 m high flank the Gila River flood plain. Above the terraces, a 10 to 20 km wide piedmont slopes gently upward toward the Pinaleno Mountains on the south and the Gila Mountains on the north. Relief of the Pinaleno Mountains above the piedmont exceeds 2,200 m, while the Gila

file 5-5

Graham County Guardian and Gila Valley Farmer (Safford, Ariz.); reel commencing with April 1, 1927 (31st year, #7), continuing thru April 20, 1928:

August 5, 1927, p. 5: Underwriters Syndicate spudded in its well on the Mary S. Mack farm at Pims on Thursday, July 28, at 1:30 P.M. Well is beginning with a 24-inch (diameter) hole.

Thid., p. 10: Synopsis of reports by other geologists on oil showings in the Gila Valley and thereabouts, beginning in 1918. It appears that to some extent, they followed the conventional wisdom of drilling on structures.

September 23, 1927, p. 1: Drilling operations at the Pima oil well are under way again, in two shifts; depth of over 60 ft. has been reached and 24" and 20" casing has been set. At the Ashurst well some changes are being made by Messrs. M.C. Trumbull and W.W. Todd of New York City, who are in charge. Carload of fuel oil has been unloaded and 24" casing has been set. Day and night shifts. Also.

October 7, 1927, p. 10: "Pima Oil Well Will Brill Next Week" "Another Carload of Casing Is Now En Route From Los Angeles" "Cochise and Graham counties, in Southern Arizona, as well as Navajo county in the north, continue to attract attention as favorable wildcat territory for oil wells."

"In the Gila valley proper two rigs are in operation at Pima and Ashurst. In the Whitlock district, on the border between Cochise and Graham, two more rigs have been set and the wells spudded in, and two more wells are to be started in Graham county in the Bear Spring s district during the fall months. At Bowie and Willcox, in Cochise county, drilling operations have been conducted spasmodically during the past year. The indications are at present that before the end of the year eight wildcat wells will be drilling in this section of the state.

J.L. Vaughan, local manager of the Underwriters Syndicate, composed of a group of eastern investors, returned on Tuesday from Los Angeles where he had been to purchase a carload of twelve and a half inch casing. This syndicate is drilling at Pima and the well was spudded in July 28th. The casing for this well is on the road and drilling operations will be resumed within the next ten days, working night and day.

November 4, 1927, p. 1: Boiler explodes at the oil well being drilled near Pimz, Az., and burns N.S. Hartsaw about the face and body; damage to machinery estimated at \$3,500. The company was using twin boilers in its operations at the well.

Thid, p. 8: Short article on the prospects for oil in the Gila Valley around

Pima and Ashurst. Makes reference to the Trumbull Seismograph.

and the highest Seismographic readings ever recorded by the Trumbull instrument.

January 27, 1928, p. 1: (Headline) "Encounter Oil Bearing Sand at Pine Well"

"The well being drilled by the Underwriters Syndicate
near Pine drilled into oil bearing formation Thursday afternoon at a depth of
1460 feet, according to information reaching the Graham County Guardian today
just before going to press and verified by J.L. Vaughan, superintendent in
charge of operation. Mr. Vaughan stated that the drill just touched the top of
the sand and no forecast could be made as to the potential production as operation was immediately shut down pending the arrival of casing."

"William J. Vaughan and William A. Leet of New York City, who head the Underwriters Syndicate and the Gila Oil Syndicates, respective, arrived in Safford a few days ago to inspect the wells they are drilling at Pima and Ashurst.

Mr. Vaughan states the Underwriters' Syndicate well, being drilled at Pima, has set casing at 1,400 feet and that the formation in this well is approximately the same as that encountered in the Whitlock well north of Bowie.

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4/20/28

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The Underwriters Syndicate well two miles northwest of Pina has suspended operations. One of these wells has been drilled to a depth of 3,765 feet. It is understood Long Beach interests are behind the enterprise.

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Fife Symington Governor

State of Arizona Arizona Geological Survey

416 W. Congress, Suite 100 Tucson, Arizona 85701 (520) 770-3500



Larry D. Fellows Director and State Geologist

file 5.5

June 3, 1996

Mr. John P. Wilson 1109 Skyway Las Cruces, New Mexico 88001-4016

Dear John:

Thank you for sending the several newspaper quotes on early drilling activity in San Simon Valley. I'm not familiar with the "oil affinity instrument" mentioned in the articles. A seismograph instrument measures and records the travel time of sound waves through the earth, sourced either by dynamite or vibroseis at the surface. The descriptions in the accounts do not make it entirely clear if the "Trumbull Seismograph" was a true seismograph instrument in this sense, or something else, like maybe a witching stick?!

You may find information on old drilling equipment by contacting a museum in a drilling town. The Oil Museum in Midland, Texas, has several of the old rigs rigged up, and it may be a good source. Maybe the museum in oil towns like Roswell or Farmington.

Finally, a copy of the section on the overthrust play in Arizona from Oil and Gas in Arizona by Nations, Brennan, and Ybarra is attached. This article gives a good overview of that play in Arizona.

Sincerely,

Steven L. Rauzi

Steve

Oil and Gas Program Administrator

Enclosure

1109 Skyway Las Cruces, New Mexico 88001-4016 May 29, 1996

Mr. Steven L. Rauzi, Oil and Gas Program Administrator Arizona Geological Survey 416 W. Congress, Suite 100 Tucson, Arizona 85701

file 5.5

Dear Mr. Rauzi:

Back in March of this year you were most helpful with information about several oil wells drilled in southern Graham County, north of Bowie, back in the late 1920's. These were the Whitlock Oil Co. State 1, Whitlock Oil Co. Penrod 1, and Bear Springs Oil & Gas Co. Allen 2 (Pinal 1) wells. Since then I've managed to acquire a copy of the USGS Oil & Gas Investigations Map OM-201 (a xerox from the USGS library) and have gone thru the Safford newspaper from the 1927-1932 period, transcribing from this all of their reporting on drilling activity. A kind librarian at the Arizona State Library in Phoenix went thru their hard copies of the San Simon Valley Oil News from this same period and photocopied the more substantial articles about the doings of the various oil companies. You of course had sent me copies of the articles, from other newspapers, that are in your files. Yet to come are copies of the annual reports filed by several of these companies, from the Arizona Corporation Commission.

It looks like the only two wells I will be expected to deal with directly for the Safford BLM office are the Whitlock State 1 and Bear Springs Pinal 1 locations. I have yet to go thru all of the newspaper materials and sort out which paragraphs deal with which wells; this will be about the next step. At this time however I am enclosing for you a copy of my notes plus 2 printouts from the Safford newspaper. There are a number of wells represented, and I suspect that sometimes the paper's mileage estimates from Bowie (or whereever) for well locations may not be accurate. For what they're worth, here you are.

I have been curious about two aspects. One is this reliance on oil affinity instruments (i.e. May 13, 1927; also July 15, 1927), which in one article (Nov. 25, 1927, p. 8) is referred to as the Trumbull Seismograph. There seems to have been more than one type of device. Do you have an idea as to what these things were and how they worked?

As you'll see, there were some accidents. A boiler blew up at one rig near Pima, and a cyclone blew down the derrick at the Pinal I well at one time. I am told that there is debris around both of the well locations I will be visiting. What I would like to see is photographs or drawings, perhaps catalog illustrations, for equipment that would have been used in drilling oil wells at this period. We even have some names; No. 28 Star drilling machine, and a Keystone rig; also an Okell combination rotary. Can you advise me where to look to find illustrations that might show such equipment well enough that I could at least tentatively identify old oil drilling hardware if parts are still lying around? Thanks.

Sincerely,

Silver Wilson

John P. Wilson

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June 1, 1996

Dear Mr Rauzi;

I seem to recall that during the late 1970's - early 1980's there was a burst of oil exploration activity in what was being called the "overthrust belt", which at least included far southwestern New Mexico and I presume into Arizona. Did this activity extend through the old Bowie-Willcox-San Simon oil field areas, from the late 1920's? Can you advise me whether there is an article somewhere that would give me an overview of the drilling activity, and the findings (if any) in this "overthrust belt" period? I recall newspaper articles but didn't save any clippings relating to this. Thank you very much.

Sincerely, Jahn Wilson

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Graham County Guardian and Gila Valley Farmer (Safford, Ariz.); reel commencing with April 1, 1927 (31st year, #7), continuing thru April 20, 1928:

August 5, 1927, p. 5: Underwriters Syndicate spudded in its well on the Mary S. Mack farm at Pima on Thursday, July 28, at 1:30 P.M. Well is beginning with a 24-inch (diameter) hole.

Ibid., p. 10: Synopsis of reports by other geologists on oil showings in the Gila Valley and thereabouts, beginning in 1918. It appears that to some extent, they followed the conventional wisdom of drilling on structures.

September 23, 1927, p. 1: Drilling operations at the Pima oil well are under way again, in two shifts; depth of over 60 ft. has been reached and 24" and 20" casing has been set. At the Ashurst well some changes are being made by Messrs. M.C. Trumbull and W.W. Todd of New York City, who are in charge. Carload of fuel oil has been unloaded and 24" casing has

been set. Day and night shifts. Also,

October 7, 1927, p. 10: "Pima Oil Well Will Drill Next Week" "Another Carload of Casing Is Now En Route From Los Angeles" "Cochise and Graham counties, in Southern Arizona, as well as Navajo county in the north, continue to attract attention as favorable wildcat territory for oil wells."

"In the Gila valley proper two rigs are in operation at Pima and Ashurst. In the Whitlock district, on the border between Cochise and Graham, two more rigs have been set and the wells spudded in, and two more wells are to be started in Graham county in the Bear Spring s district during the fall months. At Bowie and Willcox, in Cochise county, drilling operations have been conducted spasmodically during the past year. The indications are at present that before the end of the year eight wildcat wells will be drilling in this section of the state.

J.L. Vaughan, local manager of the Underwriters Syndicate, composed of a group of eastern investors, returned on Tuesday from Los Angeles where he had been to purchase a carload of twelve and a half inch casing. This syndicate is drilling at Pima and the well was spudded in July 28th. The casing for this well is on the road and drilling operations will be resumed within the next ten days, working night and day.

November 4, 1927, p. 1: Boiler explodes at the oil well being drilled near Pimz, Az., and burns N.S. Hartsaw about the face and body; damage to machinery estimated at \$3,500. The company was using twin boilers in its operations at the well.

Ibid, p. 8: Short article on the prospects for oil in the Gila Valley around

Pima and Ashurst. Makes reference to the Trumbull Seismograph,
and the highest Seismographic readings ever recorded by the Trumbull instrument.

January 27, 1928, p. 1: (Headline) "Encounter Oil Bearing Sand at Pima Well"

"The well being drilled by the Underwriters Syndicate
near Pima drilled into oil bearing formation Thursday afternoon at a depth of
1460 feet, according to information reaching the Graham County Guardian today
just before going to press and verified by J.L. Vaughan, superintendent in
charge of operation. Mr. Vaughan stated that the drill just touched the top of
the sand and no forecast could be made as to the potential production as operation was immediately shut down pending the arrival of casing."

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r school face, who are here from Gedar City, Stah. Mr. Pace is a brother of W. Pace. Thuse present were Mr. and Mrs. W. C. Pace. Mr. and Mrs. J. Verae Pace. Mr. and Mrs. D. C. Pace. and Mrs. J. Verae Pace. Mr. and Mrs. D. C. Pace. and Mrs. J. Verae Pace. Mr. and Mrs. Mr. B. Jameson.

The goat men are getting ready for the spring shearing which will begin as soon as the weather clears up.

Mr. Morrow has completed the interior work of the four apartment incuse he has made out of the Claraman and reduced in the capital city Mr. Vaughan to the oil proposition in Graham counties and reduced in marvement and the apartment incusts have been rented for sometime.

Gorden

continued flughes, a former resident flughes and states from the last of Thaicher has moved into the Dave Rogers' place at Guenbar.

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Conserved at Carlotte and Indicates may of difficulties and Indicates may appear to encounter in the way of difficulties.

Conserved at Manuel Broad at the Guard and Conserved at August, but active from the belief conserved at the Guard and office to renew his subscription to the paper. Mr. Allred bases this belief on actual experience of many rears in the business.

Ten years and he parchased a 53-store farm in the Arisense distinction of the market and in the debt of the farm and the cows both. Tueson in addition to his herd of sne cows.

Mr. Allred raises chickens and hogs enough to supply bis boully and have brings him \$25.00 ston. The products from the herd briss him and income of the oil returned the conserved at many and feels to the dairy herd. Mr. Allred figures and moth the sale and the well base as possible of supply bis boully and have brings him \$25.00 ston. The products from the herd briss him an income of the oil returned the well have to meet the care in well and the well have a possible of the west Texas and would take as down to receive and he therefore draws just the well not expect to get into production, and the well have to meet the care in well and the well have all on the grand the fill ability and base this infection.

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appeal could not be resisted, did Dr. (filtson fall from grace. A few weeks are to be went into the showrooms of the Chrysler areney of Payton. Ohio, and came out the owner of a Chrysler "52" coupe, the first car he has owned.

With only a few lessons he mastered the details of year shift and sleering, and he is now an enhusiastic Crysler owner, driving through Daylon's city traffic with as much ease and certainty as any representative of young America.

Best Man: "Ween't it annoying the way that haby cried all during the

everemous?"

"Mald of Honor: "It was dreadful. When I am married I shall have enguated on the invitations, "No bables expected."

SHERIFF'S NOTICE OF SALE NO. 2/ 33

IN THE SUPERIOR COURT OF THE COUNTY OF GRAHAM, STATE OF ARIZONA.

ARIZONA.

M. E. O'Bryau, attorney-lu-fact for the heirs of T. O'Bryan, decassed, plaintiff, versus Orville L. Larson and Orville L. Latson, administrator of the estate of Hazel Larson, deceased, defendant.

Under and by virtue of a special execution and judgment of foreclosure and spic issued out of the Superior Court of Graham County, Arizons, on the 23rd of Neventher, 1927.

All of int 4 in littock 25 of Thatcher Townslite and bounded as follows, to-wit: Beginning at a point 92 rods North and 95 rods Past of the Southwest corner of Section 2 Townslip 7 South of Range 25 East of Gile and Salt litter Meridian in Graham County, Arizona; thence running East 16 rods; thence West 16 rods; thence South 16 rods to the place of beginning, containing one and riz-tenth (16710) acres. Also one share of stock in Union Canal Company, gether with all and sinkular

GRAHAM

hostelry will be changed.

TOMRSTONE—Loas estimated between \$12,000 and \$16,000 resulted to business property here last week when the destroyed several of the business houses in no heart of the town. The fire started when a gas tank in the Owl Cafe exploded while a lenk was being mended by Jos Fredericks. 13. He was perhaps fatially burned and another, Robert Gilmore, was severely burned in attempting to save the boy.

MIAMI—Three Mexican mine laborers were crushed to death at the inspiration Consolidated Copper Company plant when they were carried to into workings of the mines on a conveyor belt on which they had gone to sleep.

Sheria. By SECH DOUGE. Deputy.

First Publication: February 17, 1928 Last Publication: March 9, 1923



East via romantic **NewOrleans**

and southern and eastern poist

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Over this route travels the 'Sunser Limited," famed' found the world. It takes you swiftly and with the greatest comfort to New Orleans where connections are made to all principle cities of the east and south. On this train is a through standard sleeper to Jacksonville, Fla. and points enroute.

From New Orleans you gan take a Southern Pacific steamerto New York and have this 100, hour ocean voyage with your meals and berth included at no. extra fare.

Also the "Argonaut" daily ver this route, carrying thru sleepers to St. Louis, Memphis, Washington, D. C. and inter-... media e points.

Ask the agent for free illus-trated folder describing the Sunset journey cast.

Southern Pacific

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Wm. A. Carraway left for his old

"Eastern Man Tells How He Became Attracted to Pima As a Promising Oil Field" January 29, 1975

Mr. Lance W. Pape Dept. of Geology Eastern Arizona College Thatcher, Arizona 85552

Dear Mr. Pape:

As per your request of January 22, 1975, we are enclosing copies of well logs on No. 5-5 Location SE NW NE T6S, R24E, Sec 13. We do not have any information on No. 8 Location SE SE SE T7S, R25E, Sec 22.

If we can be of any further service, please advise.

Very truly yours,

Rhema Brandt Secretary to W. E. Allen Director, Enforcement Section

/r1b

Enc.

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Eastern Arizona College

THATCHER, ARIZONA 85552

DEAN A. CURTIS. PRESIDENT

NORMAN L. HEAP. VICE PRESIDENT

RESEARCH. DEVELOPMENT & BUSINESS SERVICES



PHONE 428-1133

BOARD OF EDUCATION

REX O. BARNEY, PRESIDENT

DONALD I. WELKER, SECRETARY

January 22, 1975

Arizona Cil and Gas Conservation Commission 4515 North 7th Avenue Phoenix, Arizona 85013

Dear Sirs:

I would appreciate receiving the well logs for the following two holes drilled in Graham County (Safford area):

No. 8 Location SE-SE-SE T7S, R25E, sec. 22 No. 5-5 Location SE-NW-NE T6S, R24E, sec. 13

Thank you very much for this service and information.

Very truly yours,

Lance W. Pape Dept. of Geology Eastern Arizona College Thatcher, Arizona 85552

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OFFICE OF

Gil and Gas Conservation Commission

STATE OF ARIZONA

4515 NORTH 7TH AVE. PHOENIX, ARIZONA 85013 PHONE: (602) 271-5161

December 12, 1972

Mr. E. W. Daily P. O. Box 294 Mansfield, Louisiana, 71052

Dear Mr. Daily:

In reply to your recent inquiries, we submit the following. Mr. James R. Pickett's address is 100 West Clarendon, Phoenix, Arizona 85013 and his phone number is (602) 277-4223.

The information that we have on the two wells is very sketchy. Attached is a copy of the Driller's Log on Underwriters Syndicate well and also a copy of a Stratigraphic Log. We are attaching a Completion Report and Driller's Log on the Tenney #3 State. Mr. Tenney's address is Ivan D. Tenney, 600 Hill Road, Marshall, Michigan 49068 and his phone number is (616) 781-8953.

We hope that this information will be of some benefit to you.

Very truly yours,

W. E. Allen, Director Enforcement Section

WEA/rlb

Encs.

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MINERALS

LEASING

SURVEYS

E. W. DAILY

TEL. 318-872-0345

MANSFIELD, LA. 71052

P. O. BOX 294

Dec.6,1972

Mr.W.E.Allen Director Arizone Dil and Des Con.Com. 4515 M 75h. Ave Phennix , Amigana 85013

Door Ar. Allen

Towardow if you would be so kind us to chack with the fort Dapt 1624 W. Adams and Furnish we the Address of Mr. Junes B. Pickett Be has leased Sec!s 31 and 32 T VIN 1W Coconino Co.

When we wore in Phoonix these scations were open when we sent in our-leases thes- two state sections were refused because they had been leased so I called to find out who , and the name was given me, Our Concern is that these two state sections were the Center of our lease block and without them our chances of drilling a well are slix = I hope we can make some kind of a deal with him.

We to have other areas in Arizona that we have plans to develop but had hoped to start in that area so I would appreciate any light that you could shed on the above.

Thanking You Host Kindly I am Yours very truly,

cc- OBG and SA

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DEC 1/2 grand

O& G CONS. COMM.

MINERALS

SURVEYS

E. W. DAILY

TEL. 518-872-0345

MANSFIELD, LA. 71052

P. O. BOX 294

Dec.2,1972

Arizona Oil and Gas Commission 4515 North 7 th St.

Pheonix , Arizona

Gentlemen;

I was in with my group several days ago and we have made application for some 15,000 acres in Coninco T,40 and T41 N Range 1 and 2 W.

We are also interested in another area that I believe you could help a lot in giving me information on the following Wells .

No.1 Graham County Underwriters Synd. 6S 24E 13 N W.NE TD 3767 1928 No.2 Graham County Tenny 3 State 9S 27E 36 3500 Ft TD Drilled 1970 Permit No 541

I would also appreciate the Address of No.2 They may be able to give me information that you may not have.

We are interested in several areas in Arizona, and ceartainly feel that we do have an advantage in Locating Cil and Gas.

> Thanking you Most Kimily I am, Yours very truly, E. W. Daily Mark

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O&G CONS. COMM.

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August Report of the Bear Springs Oil & Gas Company

4056 ft. 61% in casing hanging at headquarters. 4035 ft. Will underream to 4160 ft. to shut off water and dry hole.

permit. SE4 SE4 Sec. 25; T. 10S. R. Mr. I. R. Borck is in charge and exthree has had a hard job to get two showings in their wells should warcamps in shape to start active work rant further explorations. camps in shape to start active work, rant minute explorations. These two wells have been practically S. V. Windle, Riggs No. I Well, N shut down for the past three years. E.Y. Sec. 10, T. 17S., R. 28E., still

Whitlock Oil Co. Well No. 1, on NEWNEW Sec. 36. T. 10S. R. 28E. State land 17 miles north of Bowie. Pinal Oil Co. in return for loan of National No. 2 drilling machine and tract for drilling the state well for 80 h. p. Buffalo Gasoline engine. owned by Whitlock Off Co., have repaired and put in good working order to pull 6.5-8 in casing and plug that Whitlock No. 1 Well back to 1500 it before moving the above equip-3 at ment to Pinal No. 1 Well

Whitlock No. 2 Well, on NEWNE ol is 14 Sec. 20, T. 10S. R. 29E, on Pen- 2680 ft.

mmer. Bowle on SW4NE4 Sec. 28, T. 118 EX Sec. 13, T. 6S, R. 24E, stand-stroy-R. 28E. Reed permit. still negotiating shut down at 3765 ft. Several ing with eastern capital to drill his deals pending to finish this well to ithing permit.

Ryan et al Well on SEUNWY Sec. 34, T. 14S., R. 30E., State, Land 9 miles south of San Simon at 920 ft. on Colrazier permit, NW NE% Sec. Arizona was made yesterdey by the e pool Tentative option has been given a 17; T. 17S., R. 19E., 9 miles west of Texas company, as foreign corporagroup of oil men; on the fifteen state Benson, expecting to contract the tion, empowered to operate in Ariland sections, held by R. J. Ryan and deepening of this well. now shut e and associates of Montebello. Calif. A "K" and type Okell drilling machine, is on location and the option calls for comtone's pletion of the well.

ave a SULPHUR SPRINGS VALLEY-Benedum-Trees, Arzberger No. 1 Well on NWP4.SE4. Sec. 19; T. 15S. of Mammoth, shut down at 1400 ft. R. 26E., 14 miles SE of Willcox, 4000 CHINO VALLEY Macia ft. 81/2 in. casing unloaded by S.-P. ted to Ry, and delivered to well; 10 in. set NEWNEW Sec. 3. T. 16N., R. 2W. at 2348 ft. Depth 3140 ft in hard 19 miles north of Prescott spudded Gas Co.; Bowie, Arizona.

Geronlino Oil Co., No. 1. No. 2. and No. 3 Wells, in town of Willcox Pinal Oil Co. Well No. 1 on Allen have shut down for the time being.

> waiting for equipment necessary to spud in. 🙀 📜 🚎

> Western Water Works of Alamogordo, W. Mr. was awarded the conartesian water to irrigate 10,000 acrest in the Stewart District. An appropriation of \$10,000.00 was allowed to do this drilling.

GILA VALLEYmiles NW of Pima, shut down at NEW COMPANIES INCORPO-

completion.

SAN PEDRO VALLEY-

Century Petroleum Co. Well No. 1 down at 1550 ft.

Understand interested people are looking over this prospect with view of starting drilling.

San Pedro Oil Corp., No. 1 Well

Pinal Oil Co. Lantz No. 1 Well

brown shale with shells. Little water in August 16th. Now about 200 feet San Simon Well, on SEMNA Sec. in hole. Two towers with crew of All casing on rack, all supplies pur-27; T. 13S., R. 30E.; Torrence ranch five. R. W. Hickman in charge, mak- chased, work is progressing in fine 2 miles west of San Simon. Walter ing very good progress, considering shape, with a steam Star rig, under Tuttle, driller, has the deepest oil the many delays. John Pugh of the supervision of Fred Womack. Supt. well, drilling, in Arizona, 4230 feet. Two John Drilling Co., Contractors, A water well was drilled to 305 ft. now in hard black sand (Lime) Good made a flying trip from Shrevesport, and 350 bbls, a day artesian flow of oil showings; 170 degree water at La. Denver Willcox and back to good water was encountered there. making drilling water for that districk a certainty.

Yavapai Oil Development Co. Kissa No. 1 Well, Sec. 27; T. 18N., R. 2W., 29 miles north of Prescott, in charge 23E. 17 miles north of Bowle. Sam pects a large heavy, standard rig of A. L. Kissh, who, I am told, has a Twentier, Field Supt. with crew of within 60 days. The splendid oil number of Japanese clients interested in this development. Their No. 1 Well will be spudded in on the 30th, I hear.

There is a possibility of an thirdwell being drilled on the Puntenney Ranch. L hear that all arrangements have been made and the rights; being shipped in from Los Angeles.

"Petroleum" a bulleting issue it by the University of Arizona, and prepared by Dr. G. M. Butler and J. El. Tennezais now ready for state distribution. The bulletin treats of the tribution. The bulletin treats of the origin of petroleum, methods of con-Glia Oil Syndicate Well No. 1. SW centration, favorable, structures, MNEW Sec. 30, T. 5S. R. 24E, 7 netroleum

4 Sec. 20, T. 10S., R. 29E, on Pen- 2680 ft.

Tod permit, still shut down at 52I Underwriters Syndicate Well No. Blue Ribbon Refinery Co., capital 1 (Vaughn-Oil Co.) 2 miles NW of Incorporators, A C. Hill Robert U. Blue Ribbon Refinery Co., capital Moore and R. H. Orkin

National Carbonic loe Co capital 1,000,000 shares, no par value incor-porators, R. M. Malone, H. A. Kehfer and C. A. Winder, all sol San Francisco.

zona. The agents are: Folsom Moore,: Bisbee, Cochise Co.; Ed Matteson, Wendon, Yuma Co.; H. R. Sisk. Nogales, Santa Cruz Co.; J. Verne Pace, Safford, Graham Co.; L. F. Sweeting, Clifton, Greenlee Co.; A. on Smith Bros. ranch 11/2 miles SE W. Sydnor. Globe, Glia Co.; Kirk Moore. Tucson, Pima Co.; Ned Creighton, Phoenix, Maricopa Co.

BOB THOMAS, Business Agent Bear Springs Oil &

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